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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,113	12/19/2001	Jaime E. Ramirez-Vick	25527-0001 C1	2617

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EXAMINER

KIM, YOUNG J

ART UNIT PAPER NUMBER

1637

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,113

Applicant(s)

RAMIREZ-VICK, JAIME E.

Examiner

Young J. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-21 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 2, 2004 has been entered.

Election/Restrictions

The instant application contains claims 22-24, drawn to non-elected invention.
Cancellation is suggested.

Preliminary Remark

All objections/rejections hereto not reiterated should be considered withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 5 are indefinite for reciting the phrase, "wherein the soft base is selected from the group consisting of succinimidyl-6-(biotinamido)hexanoate and iodoacetyl" when read in conjunction with claim 4 which states that the heterobifunctional linker is succinimidyl-6-

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(biotinamido)hexanoate, resulting in the confusion as to whether said succinimidyl-6-(biotinamido)hexanoate is a heterobifunctional inker or a soft base. When read in light of the specification, (page 9, Table 1), it appears that the heterobifunctional linker comprises a soft base functional group, but is not a soft base in itself.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Eigler et al. (U.S. Patent No. 5,077,210, issued December 31, 1991).

Eigler et al. disclose a method of immobilizing a protein (acetylcholine esterase) on a metal, Platinum (Pt) surface, wherein heterobifunctional inker, GMBS (N-gamma-maleimidobutyryloxy succinimide ester) (column 5, lines 23-24) is first applied to the metal surface, (column 10, lines 56-67), followed by washing of the platinum surface, further followed by the immobilization of the protein to the heterobifunctional linker (column 11, lines 1-5).

Since Eigler et al. produces a ligand-binding solid surface comprising a soft metal solid support (or platinum, as claimed in instant claim 15) and a heterobifunctional linker comprising functional group N-hydroxy succinimide ester, Eigler et al. anticipate the invention as claimed.

Eigler et al. also disclose that the method is employed to immobilize nucleic acids (column 5, lines 39-40), wherein the solid surface is used as biosensors (column 2, lines 27-31) for analytical use.

While Applicants' arguments are rendered moot in view of the new rejection, it should be noted that Applicants' arguments drawn to the instant invention being non-covalent, the instant

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claims do not recite such limitation. The claims recite that the heterobifunctional inkers are chemi- or physisorbed, and absent a specific (not exemplary) definition in the specification defining such limitations, any linkage is considered to be chemi- or physisorbed based on broadest reasonable interpretation. Such practice is consistent with the guidance set forth in MPEP 2106(II)(C) which states that while it is appropriate to use the specification to determine what applicant intends a term to mean, a positive limitation from the specification cannot be read into a claim that does not impose that limitation.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11 and 14-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/333,697. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

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Claim 1 of the instant application is drawn to a ligand-binding solid surface comprising a soft metal solid support and a heterobifunctional spacer having functional groups that include a soft base, wherein said soft base is selected from the group consisting of succinimidyl-6-(biotinamido)hexanoate and iodoacetyl.

Claims 1-3 of the '697 application is drawn to a ligand-binding solid surface comprising a soft metal solid support, a heterobifunctional spacer comprising a soft base anchor, a spacer arm, and a reactive terminal group selected from the group containing N-hydroxysuccinimide esters.

The specification of the '697 application, in discussing such reactive group, at page 11, line 10 to page 12, line 10), employs succinimidyl-6-(biotinamido)hexanoate.

Therefore, one of ordinary skill in the art based on the disclosure of the '697 application, would readily recognize that succinimidyl-6-(biotinamido)hexanoate and iodoacetyl is an obvious species encompassed by the genus embraced by claim 1 of the '697 application.

Claims 2-4 are drawn to a metal support being selected from the group consisting of silver, copper, gold, platinum (II), mercury, mercury (II), cadmium (II), platinum (IV), and palladium (II) covered surfaces, to which claims 2-3 of the '697 application recites.

Claims 4-8 of the instant application is drawn to a method of making the above-discussed solid support, and for the above reasons, claims 4-8 renders obvious.

Claim 9 of the instant application is drawn to an assay system comprising the above-discussed solid surface, to which claims 7 and 11 of the '697 application renders obvious since the solid surface, as discussed above, is rendered obvious.

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Claims 10 and 11 of the instant application is drawn to a generic method of assay using the above-discussed solid surface, to which claim 10 of the '697 application renders obvious.

Claims 14-21 drawn to a solid surface and method of making the solid surface, and a method of using the solid surface for generic detection assay, claims 1, 4, 5, and 8 '697 application render obvious because the soft base is recited as being selected from the group consisting of RSH, RS⁻, R₂S, RSSR, CN⁻, S₂O₃²⁻, I⁻, R₃P, (RO)₃P, C₂H₄, C₆H₆, wherein R is an organic group.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants are advised that should Applicants not file a terminal disclaimer in their response and the above-cited application issues as a patent, the provisional double patenting rejection will be changed to a double patenting rejection a subsequent final rejection.

Conclusion

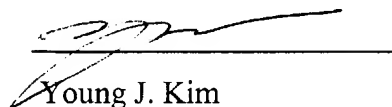
No claims are allowed.

Inquiries

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Young J. Kim whose telephone number is (571) 272-0785. The Examiner can normally be reached from 8:30 a.m. to 6:00 p.m. Monday through Thursday. If attempts to reach the Examiner by telephone are unsuccessful, the Primary Examiner in charge of the prosecution, Dr. Kenneth Horlick, can be reached at (571) 272-0784. If the attempts to reach the above Examiners are unsuccessful, the Examiner's supervisor, Gary Benzion, can be reached at (571) 272-0782. Papers related to this application may be submitted to Art Unit 1637

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by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If applicant does submit a paper by FAX, the original copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office. All official documents must be sent to the Official Tech Center Fax number: (703) 872-9306. For Unofficial documents, faxes can be sent directly to the Examiner at (571) 273-0785. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1600.



Young J. Kim
Patent Examiner
Art Unit 1637
12/7/04

YOUNG J. KIM
PATENT EXAMINER

yjk